

NOTE ON CAROTENE PAPER BY DERBY AND DEWITT

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In a recent communication (1), Derby and DeWitt compared a modified Association of Official Agricultural Chemists procedure (2) with a procedure attributed to Wall and Kelley (3) for the extraction of carotene from *dehydrated* alfalfa. The Association of Official Agricultural Chemists method involves extraction by refluxing with 30% acetone in petroleum ether, and the method attributed to Wall and Kelley utilizes cold extraction with ethanol-petroleum ether in the Waring Blendor. The experimental conclusions of Derby and DeWitt are undoubtedly correct, but we feel that their naming of the various extraction procedures is based on an incorrect interpretation of the literature.

In 1941, Moore and Ely (4) presented the method for extraction of carotene with ethanol-petroleum ether in the Waring Blendor. They applied their procedure to both fresh and dehydrated plant material.

In 1943, Wall and Kelley published their carotene procedure (3). Two extraction methods were presented. *Dehydrated* material was extracted by refluxing with 30% acetone in petroleum ether, and fresh tissue was extracted by the Moore and Ely technique (4). They did not apply the Waring Blendor extraction to *dehydrated* products.

It is obvious, therefore, that the modified Association of Official Agricultural Chemists procedure is essentially the same as the Wall and Kelley method for dehydrated products, whereas the procedure attributed to Wall and Kelley is actually the method of Moore and Ely.

REFERENCES

- (1) DERBY, J. V., and DEWITT, J. B., *This Journal*, 31, 704 (1948).
- (2) "Changes in Methods of Analysis," *Ibid.*, 31, 111 (1948).
- (3) WALL, M. E., and KELLEY, E. G., *Ind. Eng. Chem., Anal. Ed.*, 15, 18 (1943).
- (4) MOORE, L. A., and ELY, R., *Ibid.*, 13, 600 (1941).

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